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Activities of the ESCWA Technology Centre over the period 2016-2017

Summary

The present report sets out the activities implemented over the period 2016-2017 by the Technology Centre of the Economic and Social Commission for Western Asia (ESCWA), including advisory services, studies and technical reports, projects, workshops and partnerships, in relation to the Centre's expected accomplishments.

The report also presents the Centre's workplan for 2018 and its objectives towards achieving sustainable development, as adopted by the Board of Governors at its seventh meeting held on 27 November 2017. The workplan forms part of the ESCWA programme of work for the biennium 2018-2019.

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Introduction

1. The present report was prepared in accordance with the Technology Centre's statute, as set out in Economic and Social Council resolution 2010/5 on the establishment of the Centre, which requires the Executive Secretary of the Economic and Social Commission of Western Asia (ESCWA) to report on the Centre's work to the Commission at its regular sessions.

2. The report sets out the activities implemented over the period 2016-2017, including advisory services, studies and technical reports, projects, workshops and partnerships. It also summarizes the completed phases of the project financed by the United Nations Development Account on the establishment of national technology development and transfer systems in Egypt, Lebanon, Mauritania, Morocco, Oman and Tunisia, in collaboration with local partners in those countries. The report also lists the partnerships forged between the Centre and national, regional and international institutions and organizations.

3. The report then summarizes the periodic meetings of the Board of Governors and resulting decisions, and the meetings of the Centre's Technical Committee and its key recommendations on developing the Centre's workplan. The report also introduces the Centre's workplan for 2018 that was presented to the Board of Governors at its seventh meeting held on 27 November 2017; the workplan was adopted and included in the ESCWA programme of work for the biennium 2018-2019.

4. The present report requests the formation of a new Board of Governors for the period 2018-2021 at the thirtieth ESCWA session, in accordance with the Centre's statute.

I. MISSION AND OBJECTIVES

5. ESCWA Technology Centre's statute states its mission is to provide support to member States and public and private institutions in acquiring the necessary tools and capacity to expedite economic and social development so as to achieve technological parity with other countries and regions across the world, and to contribute to transforming the economies of member States in to economies based on scientific and technological knowledge.

6. To fulfil its mission, the Centre builds the capacity of member States to establish and manage national systems to develop, transfer, adapt and apply technology; to identify suitable technologies for the region, facilitate their development and transfer, and improve related legal and commercial frameworks; and to strengthen technological and scientific knowledge in key economic sectors in member States.

II. ACTIVITIES OF THE CENTRE IN RELATION TO ITS EXPECTED ACCOMPLISHMENTS FOR THE BIENNIUM 2016-2017

7. The Centre has implemented various activities comprising advisory services, studies and technical reports, projects, workshops and national, regional and international partnerships in several member States.

A. ACTIVITIES OF THE TECHNOLOGY CENTRE AT THE NATIONAL LEVEL

Expected accomplishment 1: To map, analyse and improve components of national technology development and transfer systems and relevant legislation to obtain more productive systems and more coherent legal frameworks in support of more inclusive economic development.

Achievements

8. In collaboration with local partners, the Centre implemented the project funded by the United Nations Development Account and operationalized national systems and technology transfer offices in Lebanon, Morocco, Oman and Tunisia. Partners' focal points were trained in operational processes. Mauritania was added to the countries benefiting from the project through funding from the Islamic Educational, Scientific and Cultural Organization. Achievements include operationalizing national offices and networks for technology development and transfer in partner countries; amending legislation on science, technology and innovation and related policies so as to achieve interconnected national systems based on a study analysing the existing gap in national legislation; and preparing a road map for national innovation systems in participating countries, and models for policies on property rights and technology transfer at the institutional level.

Activities

9. The Centre's activities over the period 2016-2017 included convening the Regional Forum on National Knowledge and Technology Development and Transfer Systems in Beirut in November 2017. The Centre also published a study entitled "Technology Opportunities for Sustainable Development in Arab Countries" and a report on national technology transfer systems and innovation in Egypt, Lebanon, Mauritania, Morocco, Oman and Tunisia. In addition, the Centre organized five national workshops on effective national technology transfer systems, and four national workshops on technology management and innovation protection and commercialization.

Expected accomplishment 2: To strengthen the scientific content of various critical economic sectors with selective contributions related to adequate technologies for food security, green development and sustainable energy and water resources, which reinforce socioeconomic resilience in member States.

Achievements

10. The Centre published several studies and technical reports in the fields of emerging and appropriate technologies and green technology in member States, which contribute to implementing the Sustainable Development Goals (SDGs). It also forged numerous partnerships with economic sectors to promote and incentivize the use of emerging and green technologies. The Centre signed a joint agreement with the Talal Abu-Ghazaleh Organization in Jordan and the Arab Industrial Development and Mining Organization to conduct a study on the feasibility of manufacturing for nanotechnology-based projects on water desalination and solar energy exploitation in Arab countries.

Activities

11. The Centre organized and participated in several meetings, including the Arab Forum for Nanoscience and Technologies Applications on water desalination and solar energy in Arab countries, held by the Centre in Amman in October 2017, in collaboration with the Talal Abu-Ghazaleh Organization and the Arab Industrial Development and Mining Organization; the Seminar on Islam and Science convened by the Centre in Amman in May 2016, in collaboration with the Royal Scientific Society of Jordan; and an expert group meeting on advancing green technology through the science-policy interface held by the Centre at ESCWA headquarters in April 2017, in collaboration with the ESCWA Food and Environment Policies Section.

12. The Centre, in collaboration with the Talal Abu-Ghazaleh Organization and the Arab Industrial Development and Mining Organization, published a report on the feasibility of manufacturing for nanotechnology-based projects on water desalination and solar energy exploitation in Arab countries. Moreover, in 2017, the Centre published a study on the Typology of green technology applications in Arab countries.

13. The Centre, in partnership with the Misr El Khair Foundation, held a workshop in Cairo in October 2016 on enabling inclusive development, in collaboration with the Academy of Scientific Research and Technology.

Expected accomplishment 3: To facilitate regional cooperation in research, development and innovation to address challenges in identified regional sustainable development priorities such as water, energy, food security and climate change mitigation.

Achievements

14. The Centre continued its efforts to promote integration and collaboration between Arab countries by holding several meetings on scientific research and innovation. Those meetings facilitated the exchange of expertise on the role of regional cooperation in research and development to tackle sustainable development challenges, and to work on harmonizing national strategies and plans on sustainable development in the field of science and technology.

Activities

15. Under this expected accomplishment, the Centre held several expert group meetings over the period 2016-2017: the Arab Conference on Creativity, Innovation and Competitiveness held in Cairo in May 2016, in collaboration with the Arab Industrial Development and Mining Organization, the Egyptian Ministry of Higher Education and Scientific Research, the Academy of Scientific Research and Technology and the Central Metallurgical Research and Development Institute; a special session on the role of scientific cooperation and regional integration in achieving the SDGs in Arab countries, held at the World Science Forum in Amman in November 2017; and an expert group meeting on ethics in scientific research related to technology applications in the Arab region, held in Beirut in July 2017, in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the National Council for Scientific Research of Lebanon.

16. The Centre also organized several workshops and training sessions: an Arab consultative meeting on scientific guidance in policymaking, held in Amman in December 2016, in partnership with the Royal Scientific Society of Jordan, the United States Civil Research and Development Foundation and the International Network for Government Science Advice; a regional workshop on linking scientific research institutes with industry in Arab countries, held in Amman in October 2016, in collaboration with the Arab Industrial Development and Mining Organization; and another on research impact assessment, held in Amman in November 2016, in collaboration with the Qatar Foundation.

B. ADVISORY SERVICES

17. The Centre implemented four advisory services over the period 2016-2017 in Jordan and Lebanon. In Jordan, the Centre held a national workshop on harnessing national capacity in science, technology and innovation for sustainable development, in collaboration with the Ministry of Planning and International Cooperation. It assisted the National Centre for Research and Development of the Higher Council for Science and Technology in preparing a research and development strategy, and supported the Jordanian Scientists and Technologists Abroad project undertaken by the Higher Council to connect Jordanian scientists and technology experts living abroad with counterparts and research centres in Jordan. In Lebanon, the Centre, in collaboration with the Ministry of Energy and Water, identified the main components of a road map for technology transfer in gas-related industries in Lebanon.

C. Partnerships

18. Over the period 2016-2017, the Centre implemented various activities in collaboration and partnership with several public and private institutions and civil society organizations in member States, as well as regional and international organizations. Table 1 sets out those institutions and organizations.

Table 1. Institutions that collaborated with the Centre in implementing its activities over the period 2016-2017

Number	Name of institution	Country/parent institution
1	Royal Scientific Society	Jordan
2	Higher Council for Science and Technology	Jordan
3	Ministry of Planning and International Cooperation	Jordan
4	Ministry of Information and Communications Technology	Jordan
5	Jordan University of Science and Technology	Jordan
6	Qatar Foundation	Qatar
7	Kuwait Institute for Scientific Research	Kuwait
8	Arab Industrial Development and Mining Organization	League of Arab States
9	Talal Abu-Ghazaleh Organization	Regional organization based in Jordan
10	Academy of Scientific Research and Technology	Egypt
11	National Council for Scientific Research	Lebanon
12	Ministry of Energy and Water	Lebanon
13	National Centre for Scientific and Technical Research	Morocco
14	Research Council of the Sultanate of Oman	Oman
15	University of Science, Technology and Medicine	Mauritania
16	National Agency for the Promotion of Scientific Research	Tunisia
17	Arab League Educational, Cultural and Scientific Organization	League of Arab States
18	Misr El Khair Foundation	Egypt
19	Islamic World Academy of Sciences	Jordan

III. BOARD OF GOVERNORS

19. Annex I to the present report lists the members of the Board of Governors for the period 2016-2018.

Meetings of the Board of Governors over the period 2016-2017

20. The Centre's Board of Governors held its annual meeting for 2016 at the Royal Scientific Society in Amman on 14 November. The meeting was attended by representatives of 12 Arab countries. Discussions focused on the water-energy-food nexus, climate change, and the role of science and technology in that regard and their links to sustainable development policy management. The Board approved the formation of an ad hoc committee tasked with clarifying strategic goals and ways to incorporate technology initiatives into the nexus. The Board also stressed the importance of promoting emerging technology applications in the fields of water, energy and food, given that those fields were directly linked to daily necessities, especially in regions facing security issues and conflict. Pursuant to a recommendation by the Board, the ad hoc committee held a meeting attended by ESCWA representatives in Amman on 22 May 2017 to discuss the Centre's amended work process, and the role of science and technology in the water-energy-food nexus and climate change and its links to ESCWA Sustainable Development Policies Division. The committee underscored the importance of support, financing, partnership and flexibility, especially in view of the Centre's work and achievements in the past years.

21. The Board of Governors held its meeting for 2017 in Beirut on 28 November. Representatives of 10 Arab countries attended the meeting. Discussions focused on the Centre's activities for 2017, and the role of science, technology and innovation in achieving Arab sustainable development targets and indicators. The Board members were also briefed on regional preparations for the 2019 *Global Sustainable Development Report*. They discussed the proposed workplan for the Centre in the light of new processes to support member States and harness technology to achieve sustainable and inclusive development. Their recommendations and suggestions focused on the necessity of developing a regional plan to follow up on the implementation of the SDGs and to exchange expertise, and of establishing a fund to implement the SDGs in Arab countries. The Board approved the Centre's workplan for 2018. It also called for greater regional cooperation in the field of rebuilding countries emerging from conflict and in other scientific and technological fields, especially solid waste management, and for securing financial support for that critical issue. It also urged Arab countries to benefit from technology transfer to identify solutions to urgent and ongoing problems, such as water, agriculture and waste.

IV. TECHNICAL COMMITTEE

Meetings of the Technical Committee over the period 2016-2017

22. The Technical Committee of the ESCWA Technology Centre convened two meetings. The first was held in Amman in October 2016, and was attended by 30 experts from 12 Arab countries. Participants discussed various issues, including the priorities of the Arab region related to science and technology, and the possibility of linking them to the Centre's workplan. Their recommendations focused on coordinating with Arab and international organizations working in technological research and development, and identifying focal points. The second meeting was held in Beirut in May 2017, and was attended by 31 experts from 14 Arab countries representing regional organizations, scientific institutions, and various industrial and research centres. Participants discussed the Centre's workplan for the biennium 2018-2019, which would be presented to the Board of Governors at its next meeting. Most recommendations stressed the importance of focusing on policy, governance, culture and awareness-raising; and the need for comprehensive regulatory frameworks to bridge the gap between research and the private sector, for coordinating the science-policy nexus, and for promoting domestic programmes suitable to a development and innovation strategy supporting green energy solutions and the water-energy-food nexus.

V. WORKPLAN OF THE CENTRE FOR 2018 AND ITS OBJECTIVES TOWARDS ACHIEVING SUSTAINABLE DEVELOPMENT

23. Pursuant to recommendations made by the ESCWA Executive Committee at its third meeting held in Rabat, on 6 and 7 May 2017, ESCWA will undertake various technology-related activities, including projects, studies, workshops and training sessions, and will provide advisory services to member States.

24. The Centre's workplan for 2018 is based on an approach that incentivizes joint Arab action, in partnership with stakeholders, pursuant to an ESCWA Executive Committee recommendation on technology that requests the secretariat to continue supporting Arab countries in ensuring that their national plans include methods to harness and invest technology for development, so as to promote sustainable development and encourage a shift towards the digital economy, smart societies and youth innovation for inclusive growth, with special focus on young people.

25. Table 2 sets out the main provisions of the Centre's workplan, which were reviewed and adopted by the Board of Governors at its seventh meeting held in Beirut on 27 November 2017, and which are consistent with the ESCWA programme of work for the biennium 2018-2019. It should be noted that some activities will continue being implemented in 2019.

TABLE 2. KEY PROVISION OF THE CENTRE'S WORKPLAN FOR 2018

Building stakeholder capacity and responding to countries' requests for advisory services
- Receive requests for technical services, and respond to them in line with priorities
Developing knowledge materials, conducting research and studies, disseminating information and promoting good practices
- Transfer and adapt technology to achieve sustainable consumption and production in Arab countries
- Prepare a report on the topic
- Hold a regional expert group meeting with stakeholders to validate outcomes and recommendations
- Conduct case studies on waste, water and energy management
- Carry out a study on innovative technologies to strengthen the resilience of the agricultural sector against the impact of climate change
Supporting member States in achieving the SDGs
- Promote the effective achievement of the SDGs in the Arab region by harnessing science and technology
- Draft a proposal for a project to strengthen Arab countries' capacity in adapting to climate change through South-South cooperation in agricultural technology transfer
- Prepare two scientific papers on ways to achieve sustainable development:
(a) Technology to expedite the achievement of sustainable development
(b) Investment for development
- Convene a session on technology for sustainable development in the Arab region at the thirtieth ESCWA session, to be held in Beirut from 25 to 28 June 2018
Forging partnerships and coordinating with regional and international partners
- Hold a regional expert group meeting on ways to achieve the SDGs, in collaboration with the Regional Office of the United Nations Development Programme and other partners
- Conduct a workshop on governance of science parks and technological incubators, in collaboration with the Arab Industrial Development and Mining Organization
Following up on activities for 2017
- Hold an expert group meeting in May 2018 on the sidelines of the Arab International Industrial Forum and its concomitant exhibition in Cairo, on the theme "Moving towards innovative sustainable development" to follow up on recommendations contained in a 2017 report on nanotechnology applications in water desalination and solar energy in Arab countries.

VI. FORMATION OF THE BOARD OF GOVERNORS FOR THE PERIOD 2018-2021

26. Pursuant to the Centre's rules of procedure, a new Board of Governors is currently being formed for the period 2018-2021. Nominations have been received from several member States. Annex II to the present report lists nominees for the Centre's Board of Governors for the period 2018-2021.

Annex I

MEMBERS OF THE BOARD OF GOVERNORS FOR THE PERIOD 2016-2018

Number	Country	Name	Job title	Institution
1	Jordan	Princess Sumaya bint el Hassan	President of the Royal Scientific Society	Royal Scientific Society
2	United Arab Emirates	Mr. Abdulla Sultan Alshamsi	Assistant Under-Secretary for Industrial Affairs	Ministry of Economy
3	Bahrain	Shaikha Rana bint Isa al Khalifa	Assistant Under-Secretary for Western Countries and Afro-Asian Affairs and Organizations	Ministry of Foreign Affairs
4	Syrian Arab Republic	Mr. Mohammad al-Jalali	Former minister	Ministry of Communications and Technology
5	Sudan	Mr. Issa Tartib Shater	Director of the Office of Policy and Strategic Planning	Ministry of Commerce, Industry and Investment
6	Iraq	Mr. Hussein Dawood	Director of the International Cooperation Directorate	Ministry of Planning
7	Oman	Mr. Obaid bin Mohammed al-Saeedi	Director of the Programmes Department	Research Council of the Sultanate of Oman
8	State of Palestine	Mr. Mohamad Badr	Adviser to the Minister	Ministry of Telecom and Information Technology
9	Qatar	Mr. Hamad al-Ibrahim	Executive Vice President of Research and Development	Qatar Foundation
10	Kuwait	Ms. Samira al-Sayed Omar	Director-General	Kuwait Institute for Scientific Research
11	Lebanon	Mr. Moeen Hamzeh	Secretary-General	National Council for Scientific Research
12	Libya	Mr. Ibrahim Tika	Director of the Science and Technology Department	Libyan Commission for Research, Science and Technology
13	Egypt	Mr. Mahmoud Mohamad Sakr	President	Academy of Scientific Research and Technology
14	Morocco	Mr. Abdelhaq Mradi	Director of Scientific Research and Innovation	Ministry of Higher Education, Scientific Research and Professional Training
15	Saudi Arabia	Mr. Meteb bin Abdulaziz	Director of the Innovation and Industrial Development Institute	King Abdulaziz City for Science and Technology
16	Yemen	Mr. Yahya al-Rawi	President	National Information Centre

Annex II

MEMBER STATE NOMINEES FOR THE BOARD OF GOVERNORS FOR THE PERIOD 2018-2021

Number	Country	Name	Job title	Institution
1	Jordan	Princess Sumaya bint el Hassan	President of the Royal Scientific Society	Royal Scientific Society
2	United Arab Emirates			
3	Bahrain			
4	Tunisia			
5	Syrian Arab Republic	Ms. Fadia Suleiman	Director-General of the National Authority for Network Services	Ministry of Communications and Technology
6	Sudan	Mr. Ahmed Hassan Fahl	Chair of the Scientific Research and Innovation Authority	Ministry of Higher Education and Scientific Research
7	Iraq	Mr. Hussein Ali Dawood	Director-General of the Sectors Planning Department	Ministry of Planning
8	Oman			
9	State of Palestine	Mr. Mohamad Badr		Ministry of Telecom and Information Technology
10	Qatar			
11	Kuwait			
12	Lebanon			
13	Libya	Mr. Abu al-Qasim Mohammed al-Mashai	Senior Researcher – Associate Professor	Ministry of Education – Authority for Research, Science and Technology
14	Egypt			
15	Morocco	Mr. Mohamed Hajroun	Director of Electricity	Ministry of Energy, Mines and Sustainable Development
16	Saudi Arabia			
17	Mauritania	Mr. Mohammed Yahya al-Taleb Ahmed al-Daydah	Assistant Director-General for Policy and Development Strategies	Ministry of Economy and Finance
18	Yemen	Mr. Yahya al-Rawi	President	National Information Centre

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